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BIBLIOGRAPHY

CODES, STANDARDS, PROCEDURES, SPECIFICATIONS AND REPORTS RELATING TO CONTAMINATION CONTROL



JUNE 1970



GODDARD SPACE FLIGHT CENTER
GREENBELT, MARYLAND

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**CODES, STANDARDS, PROCEDURES, SPECIFICATIONS AND
REPORTS RELATING TO CONTAMINATION CONTROL**

Francis N. LeDoux

June 1970

**This document has been prepared for The National Committee on Codes
and Standards, American Association for Contamination Control**

**GODDARD SPACE FLIGHT CENTER
Greenbelt, Maryland**

INTRODUCTION

This is the first attempt to assemble in one publication an up-to-date bibliography listing Codes, Standards, Procedures, Specifications and/or reports which relate to Contamination Control.

An example of method of entry is as follows:

ORIGIN CODE	TYPE OF DOCUMENT	SOURCE CODE	DOCUMENT NUMBER
GSFC	- PROC	- B-2	PROCEDURE P-III
Particulate Decontamination Procedure for Spacecraft			
TITLE	Hardware used for Critical Subsystems, 11-21-68		DATE
	27 pages		
	LENGTH		

<u>ORIGIN</u>	<u>SOURCE CODE</u>	<u>ADDRESS</u>
NASA Hdq.	A-1	National Aeronautics and Space Administration Washington, D. C. 20546 Attn: Management Issuances Section Code DHA-11
NASA Hdq.	A-2	National Aeronautics and Space Administration Washington, D. C. 20546 Attn: Apollo Data Manager Program Control Office Code MAP-2
NASA Hdq.	A-3	National Aeronautics and Space Administration Washington, D. C. 20546 Attn: Information Services Branch Code UST
NASA Hdq.	A-4	National Aeronautics and Space Administration Washington, D. C. 20546 Attn: Office of Planetary Quarantine
BE	AA-1	Budd Electronics Environmental Control Systems Div. of Pall Corp. 32 Sea Cliff Ave. Glen Cove, L. I., N. Y. 11542 516-OR 1-4000
CR	AB-1	Collins Radio Company 1200 N. Alma Rd. Dallas, Texas
LH	AC-1	Lockheed Aircraft Corp. 2555 N. Hollywood Way Burbank, Calif.
GWU	AD-1	George Washington University Suite 700, 2000 P Street, N. W. Washington, D. C. 20036 Attn: Biological Sciences Communication Project

WK	AE-1	Walter Kidde and Company, Ind. Aerospace Div. Belleville 9, New Jersey
ACGIH	AF-1	American Conference of Governmental Industrial Hygienists Secretary Treasurer 1014 Broadway Cincinnati, Ohio 45202
LRS	AG-1	Langley Research Center Langley Station Hampton, Virginia 23365
MILL	AH-1	Millipore Filter Corporation Bedford, Massachusetts 01730
RICH	AI-1	The Richmond Corporation P.O. Box 1129 Redlands, California 92373
NAS	AJ-1	Aerospace Industries Association of America Inc. 1725 De Sales Street, N. W. Washington, D. C. 20036
GSFC	B-1	Goddard Space Flight Center Greenbelt, Maryland 20771 Attn: Specification Depository Code 252
GSFC	B-2	Goddard Space Flight Center Greenbelt, Maryland 20771 Attn: Spacecraft Integration and Sounding Rocket Div. Code 720
C	BB-1	Chrysler

ARC	C-1	Ames Research Center Moffett Field, California 94035 Attn: Reliability and Quality Assurance Branch Mail Stop 211-7
D	CC-1	Douglas Aircraft Co. 3000 Ocean Park Blvd. Santa Monica, Calif.
FRC	D-1	Flight Research Center P.O. Box 273 Edwards, California 93523 Attn: Technical Order Library Quality Assurance Office
GD	DD-1	General Dynamics Electric Boat Div. 1 Rockefeller Plaza New York, N. Y.
GD	DD-2	General Dynamics 150 T Avenel St. Avenel, N. J. 07001 201-636-9100
MSFC	E-1	George C. Marshall Space Flight Center Huntsville, Alabama 35812 Attn: Documentation Repository Branch Code MS-D
MSFC	E-2	George C. Marshall Space Flight Center Huntsville, Alabama 35812 Attn: Apollo Data Manager Resources Management Office Code I-RM-M
MSFC	E-3	George C. Marshall Space Flight Center Huntsville, Alabama 35812 Attn: Code R-ME-MMC
FCI	EE-1	Firewel Co., Inc. The ARO Corp. Subsidiary: The Firewel Co. Buffalo, N. Y. Dept. AT Bryan, Ohio 43506

MSC	F-1	Manned Spacecraft Center Houston, Texas 77058 Attn: Microreproduction Supervisor Code BM6C
MSC	F-2	Manned Spacecraft Center Houston, Texas 77058 Attn: Apollo Data Manager Plans and Analysis Branch Code PP-3
MSC	F-3	Manned Spacecraft Center Houston, Texas 77058 Attn: Checkout Systems Branch Code EB5
MSC	F-4	Manned Spacecraft Center Houston, Texas 77058 Attn: Quality Control Branch Code NC-3
MSC	F-5	Manned Spacecraft Center Engineering Data Repository Building 45 Houston, Texas
GE	FF-1	General Electric (more specific 21 Div. exist) See attached sheets
KSC	G-1	John F. Kennedy Space Center Kennedy Space Center, Florida 32899 Attn: Specifications and Standards Section Code ASO-315
KSC	G-2	John F. Kennedy Space Center Kennedy Space Center, Florida 32899 Attn: Apollo Data Management Branch Code PPR-33
KSC	G-3	John F. Kennedy Space Center Kennedy Space Center, Florida 32899 Attn: Administrative Support Branch Code INS-53

KSC	G-4	John F. Kennedy Space Center Kennedy Space Center, Florida 32899 Attn: Code SO-QUAL
GA	GG-1	Grumman Aircraft Engineering Corp. Bethpage, N. Y.
JPL	H-1	Jet Propulsion Laboratory 4800 Oak Grove Drive Pasadena, California 91103 Attn: Document Services Mail Stop 111-222
HS	HH-1	Hamilton Standard Electronics Dept. Broad Brook, Conn.
ERC	I-1	Electronics Research Center 575 Technology Square Cambridge, Massachusetts 02139 Attn: Research Engineering Branch Code ATR
HA	II-1	Hughes Aircraft Company Space Systems Division Surveyor Laboratory
FED.STD.	J-1	General Services Administration Business Service Center Washington, D. C. 20407
LTV	JJ-1	Ling Temco Vought Box 5003 Dallas, Texas
MIL.STD.	K-1	Naval Publications and Forms Center 5801 Taber Avenue Philadelphia, Pa. 19120
MC	KK-1	Martin Company Middle River Baltimore, Md.

USAF	L-1	Headquarters United States Air Force Washington, D. C. 20330
MD	LL-1	McDonnell Aircraft Corporation Box 516 St. Louis, Mo.
ASTM	M-1	American Society For Testing Materials 1916 Race Street Philadelphia, Pa. 19103
MH	MM-1	Minneapolis Honeywell Special Systems Division
SE	N-1	Scientific Enterprises, Inc. 468 Polygon Market, Box 282 Broomfield, Colorado 80020
NAA	NN-1	North American Aviation, Inc. (Rocketdyne) Canoga Park, Calif.
CE	O-1	Controlled Environment Equipment Corp. 101 South Avenue Whitman, Mass. 02382
ORD	OO-1	Ordnance
AVCO	P-1	Avco Corporation Lowell Street Willmington, Mass.
TC	PP-1	Thiokol Chemical Bristol Div. Bristol, Pa.
COIHC	Q-1	Secretary American Conference of Governmental Industrial Hygienists 1014 Broadway Cincinnati, Ohio 45202

SOTC	R-1	Snap-On Tool Corporation Government Contract Div, 8028 28th Avenue Kenosha, Wisconsin
SAE	S-1	Society of Automotive Engineers Inc. 485 Lexington Avenue New York, N. Y. 10017
AACC	T-1	American Association for Contamination Control Six Beacon Street Boston, Mass. 02108
PHS	U-1	U.S. Department of Health, Education and Welfare Public Health Service Communicable Disease Center Atlanta, Georgia 22
AG	V-1	Aerojet-General 9100 East Flair Dr. El Monte, Calif. 91734 213-288-7250
AM	W-1	American Machine and Foundry Vice President, Corporate Programs AMF Executive Offices 261 Madison Ave. New York, N. Y. 10016
AP	X-1	Air Products and Chemical, Inc. Box 538 Allentown, Pa. 18105 215-395-4911
AR	XX-1	Air Research Manufacturing Company (can't find)
BA	Y-1	Bell Aerosystems Co. Box 1-TR Buffalo, N. Y. 14240 716-297-1000

B

Z-1

Bendix

BA

ZZ-1

Boeing Aerospace Div.
7755 E. Marginal Way
Seattle, Wash.

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SPECIFICATIONS FOR ACIDS & DETERGENTS

MIL-SPEC-K-1

MIL-D-16791E

Military Specification, Detergents, General Purpose (liquid, nonionic) supersedes MIL-D-0016791D (SHIPS) dated 17 September 1963 and MIL-D-16791C dated August 1956: dated 11 August 1964, 13 pages.

FED-SPEC-J-1

O-H-795

Federal Specification, Hydrofluoric Acid, Technical, supersedes Int. Fed. Spec. O-A-87 (NAVY-SHIPS) dated 17 March 1952: dated 20 May 1953, 5 pages.

MIL-SPEC-K-1

MIL-M-10578B

Military Specification, Metal Conditioner and Rust Remover (Phosphoric Acid Base) supersedes MIL-M-10578A dated 3 August 1953: dated 16 March 1956, 9 pages.

FED-SPEC-J-1

O-O-670

Federal Specification, Orthophosphoric (Phosphoric) acid, Technical, Supersedes Int. Fed. Spec. O-P-00313A (GSA-FSS) dated 8 April 1949: dated 30 March 1960, 6 pages.

MIL-SPEC-K-1

MIL-D-1691E

Military Specifications, Detergents, General Purpose (liquid nonionic) supersedes interim Amendment No. 1 dated 12 January 1965: Amendment No. 2 dated 27 August 1965, 2 pages.

CLEANLINESS

Cleanliness Levels, Propulsion, Power and Control Systems

GA-SPEC-GG-1	LSP-270-0001A
Cleanliness Level Requirements Propulsion Subsystems (Ascent and Descent Stages).	
HA-PROC-II-1	262613
General Cleaning Procedures for Surveyor Vernier Propulsion System Hardware.	
NAA-SPEC-NN-1	MA0610-001
Cleanliness Requirements for Apollo Propulsion Systems.	
D-STD-CC-1	DPS-4.905-3
Cleaning and Processing Sensing Devices for Liquid Oxygen Power System.	
NAA-PROC-NN-1	RA0110-025
Cleaning Carbon from Rocket Engine Components.	
MSFC-SPEC-E-3	MS 100.0
Cleaning of Space Launch Vehicle Fuel and Oxidizer Containers and Container Components, dated September 5, 1961, 12 pages.	
AG-STD-V-1	AGC-46652
Cleanliness Requirements for the Apollo Service Module Engine.	
NAA-SPEC-NN-1	MA0610-005
Cleanliness Requirements for Saturn S-II Hydraulic Engine Actuation Systems and System Components.	
NAA-PROC-NN-1	RA0615-005
Solid Particle Contamination Control of Flushing, Test, Calibration, and Operating Fluids for Space Engines Assemblies.	
AVCO-PROC-P-1	QATP-SD-75
Precision Cleaning and Cleanliness Level Determination of the Resistor-Jet ATS-S&E Components, Rev. A dated 6-20-68, 45 pages.	
GA-SPEC-GG-1	LSP-310-0001
Cleanliness Levels Reaction Control Subsystem, General Specification for.	

Cleaning Procedures for Spacecraft, Equipment and Assemblies

MSC-STD-F-2	MSC-SPEC-C-5A
Apollo Spacecraft, Cleanliness Specifications For, dated September 1966, 17 pages.	
MSC-SPEC-F-2	MSC-SPEC-C-27
Apollo Extravehicular Mobility Unit (EMU) Cleanliness, Specifications For, dated December 12, 1967, 9 pages.	
MSC-SPEC-F-2	MSC-SPEC-C-5A
Apollo Spacecraft, Cleanliness Specification for, Amendment No. 1, dated 11 August 1969, 1 page.	
MSC-SPEC-F-2	MSC-SPEC-C-18
Apollo Spacecraft Facilities Equipment Surface Cleanliness, Specifications For, dated March 13, 1967, 5 pages.	
MSC-SPEC-F-4	MSC-SPEC-C-8
Spacecraft On-Board Equipment, Cleanliness Specifications For, dated September 1966, 4 pages.	
MSC-SPEC-F-2	MSC-SPEC-C-19
Apollo Spacecraft Component Surface Cleanliness, Specifications For, dated March 1967, 8 pages.	
MSC-SPEC-F-4	MSC-SPEC-C-8
Spacecraft On-Board Equipment, Cleanliness, Specifications For, Amend- ment #1, dated January 5, 1967, 1 page.	
LTV-SPEC-JJ-1	308-20-2
Cleaning of Manned S/C Parts, Components and Assemblies.	
TC-PROC-PP-1	7023
General Part and Assembly Cleaning Procedure.	
TC-PROC-PP-1	0006
Part and Assembly Cleaning Procedure.	

Cleanliness Levels, Components, Material, Hydraulic, Pneumatic,
Oxidizer and Fuel Systems

MSC-SPEC-F-4	SN-C-0024
General Specification, Cleanliness of Environmental Test Chambers (oxy- gen rich, physiological, or vacuum) dated 31 March 1969, ~ pages.	
MSC-SPEC-F-4	MSC-SPEC-C-9A
Cleanliness of Non-Airborne Breathing Systems, Specifications For, dated June 9, 1967, Supersedes MSC-SPEC-C-9 dated October 10, 1966, 4 pages.	
MSFC-SPEC-E-1	10MO1671B
Cleanliness Levels, Cleaning, Protection and Inspection Procedures for Parts, Field Parts, Assemblies, Subsystems and Systems for Pneumatic Use in Support Equipment, Specifications For, dated 4-28-64 EO-2, 7-28-64.	
AG-STD-V-1	AGC-46350C
Levels of Cleanliness, Description of.	
LTV-STD-JJ-1	309-79
Cleanliness Classification and Contamination Allowables.	
MSC-SPEC-F-4	MSC-SPEC-C-23
Surface Cleanliness Levels for Sampling Equipment, Specifications For, dated May 11, 1967, 5 pages.	
GD-SPEC-DD-2	0-75092
Cleanliness Level of Non-Critical Components, Specifications for.	
GA-SPEC-GG-1	LSP-14-0011
Surface Cleanliness Levels, General Specification for.	
GA-STD-GG-1	LSP-14-0011
Surface Cleanliness Levels, Dated March, 1965, 13 pages, Amendment #1, dated June, 1965, 2 pages. Amendment #2, dated September, 1965, 1 page, Amendment #3, dated October, 1965, 1 page.	
GA-SPEC-GG-1	LSP-390-0001
Cleanliness Levels, Cryogenic Storage and Supply Section, Electrical Power Subsystem.	
MIL-STD-K-1	MIL-STD-1246A
Product Cleanliness Levels and Contamination Control Program, dated 18 Aug. 1967, 15 pages.	

NAA-PROC-NN-1

RA0615-003

Solid Particle Contamination, Classification of Levels and Method of Measurement, for Space Engines.

MSFC-SPEC-E-1

10419906B

Cleanliness Levels, Cleaning and Inspection Procedures for Component Parts of Gas Bearing and Sloss Measuring System, Specifications dated 6-26-62, EO-1, 7-2-63, EO-3, 4-3-64.

MSFC-PROC-E-1

10419906B

Cleanliness Levels, Cleaning and Inspection Procedures for Component Parts of Gas Bearing, and Sloss Measuring Systems, Specifications for dated, 6-26-62, EO-1, 7-2-63, EO-3, 4-3-64.

MSFC-PROC-E-1

MSFC-PROC-195A

Cleanliness Level Requirements and Inspection Methods for Determining Cleanliness Level of Gas Bearing Gas Supply and Sloss Measuring Systems dated, 8-10-66, Superseding MSGC-PROC-195 dated August 1, 1962 and Amendment #1 dated August 30, 1963, 11 pages.

MSFC-SPEC-E-1

10MO1671

Cleanliness Levels Cleaning Protection and Inspection Procedures for Parts, Field Parts, Assemblies, Subsystems, and Systems for Pneumatic Use in Support Equipment, Specifications For, dated September 23, 1963, 25 pages.

KSC-SPEC-G-5

KSC-C-123(D)

Cleanliness Levels, Cleaning, Protection and Inspection Procedures for Parts, Field Parts, Assemblies, Subsystems, and Systems for Fluid Use in Support Equipment, Amendment #3, Supplement #1 dated March 14, 1968, Superseding KSC-C-123(D) Amendment #3, dated July 12, 1965, 10 pages.

GD-SPEC-DD-2

D1B NO. 12-1.023

Aerodynamic Attitude Control Hydraulic and Pneumatic System Contamination Limits.

GD-SPEC-DD-2

27-08798

Cleanliness Requirements for Hydraulic and Pneumatic GSE.

GD-SPEC-DD-2

0-75106

Cleanliness and Preservation of Cleanliness for Non-Critical Hydraulic Components, Specification for.

GD-SPEC-DD-2	0-75105
Cleanliness and Cleanliness Preservation of Non-Critical Pneumatic Components, Specification for.	
GD-SPEC-DD-2	0-75035
Permissible Contamination Limits, Pneumatic System Components, Specification.	
GD-SPEC-DD-2	0-75001
Permissible Contamination Limits, Fuel System Components, Specification for.	
ORD-PROC-00-1	10425040
The Method of Cleaning and the Method of Determining the Cleanliness Level of Missile Hydraulic Support Equipment.	
ORD-SPEC-00-1	1-10509305
Cleanliness of Components for Use in Liquid Oxygen, Fuel, and Pneumatic Systems, Specification for.	
NAA-SPEC-NN-1	MA0110-801
Cleanliness Requirements of Components Used in Oxidizer, Fuel, Circulating and Pneumatic Systems of Apollo Ground Support Equipment.	
NAA-SPEC-NN-1	MA0610-008
Cleanliness Requirements for Saturn S-II Liquid Oxygen, Liquid Hydrogen and Pneumatic Systems and Components.	
NAA-SPEC-NN-1	MA0610-012
Cleanliness Requirements for Apollo Spacecraft Cryogenic Systems.	
NAS-SPEC-AJ-1	ARTC-Report-No. 28
Specification for Contamination Control of Hydraulic Fluid, Revision dated 15 December 1964, 8 pages.	
MSC-SPEC-F-4	MSC-SPEC-C-6B
Specification Spacecraft Chemical and Fluid Cleanliness Requirements, dated 14 January 1969, supersedes MSC-SPEC-C-6A dated 26 June 1967, 39 pages.	
MSC-SPEC-F-4	MSC-SPEC-C-6B
Errata Sheet, Table B-VI — Revision A, Qualified Filter Data, dated 29 May 1969, 1 page.	

MSFC-SPEC-E-1	MSFC-SPEC-164
Cleanliness of Components for Use in Oxygen, Fuel and Pneumatic Systems dated, 7-27-64 Amendment #4, 3 pages Superseding Amendment #3 dated 6-3-64.	
MSFC-SPEC-E-1	MSFC-SPEC-164
Cleanliness of Components for Use in Oxygen, Fuel and Pneumatic Systems, dated, 4-16-62, 25 pages.	
MHI-SPEC-MM-1	5012
Cleanliness Limits for Components Used in Support of Pneumatic Systems.	
MSC-SPEC-F-2	MSC-SPEC-C-7
Apollo Spacecraft, Fluid Systems Surface Cleanliness, Specifications For, dated November 17, 1966 Amendment #1 is a part of MSC-SPEC-C-7 dated October 24, 1966, 6 pages.	
MSC-SPEC-F-2	MSC-SPEC-C-6A
Apollo Spacecraft, Fluid Cleanliness Specifications For, dated June 26, 1967, Supersedes MSC-SPEC-C-6 dated October 15, 1966, 30 pages.	
HS-STD-HH-1	GSS-122
Cleanliness of Components for Use in Storable Liquid Propellant System (Saturn S-IVB) APS System.	
KSC-SPEC-G-5	KSC-C-123(D)
Cleanliness Levels, Cleaning, Protection, and Inspection Procedures for Parts, Field Parts, Assemblies, Subsystems, and Systems for Pneumatic Use in Support Equipment, Amendment #3 dated July 12, 1965, Superseding Amendment #2 dated May 24, 1965, 10 pages.	
KSC-SPEC-G-1	KSC-C-182
Gas Cleanliness Requirements for Operational Gaseous Nitrogen, Helium and Hydrogen Systems at Complex 39 dated, 6-7-66 7 pages.	
MSFC-PROC-E-1	MSFC-PROC-404
Gases, Drying and Preservation, Cleanliness Level and Inspection Methods, Procedure for dated, 10-20-64.	

USAF-L-1

AFBS-EXHIBIT-61-3C

Permissible Contamination Limits and Inspection Criteria for Liquid Oxygen, Liquid Nitrogen, RP-1 Fuel, Gaseous Oxygen, Gaseous Nitrogen, Instrument Air and Helium, Components and Handling Systems.

D-SPEC-CC-1

IP00041

Cleanliness for Oxidizer and Fuel Systems and Related Pneumatic Systems.

CLEANING

General Cleaning, Methods & Inspection

NAA-PROC-NN-1 General Cleaning Methods.	MA0110-010
FRC-PROC-D-1 Cleaning Methods and Processes, dated 9-16-63.	20-1
BA-SPEC-Y-1 Cleaning of Materials; General Specification for.	BPS-4138
NAA-PROC-NN-1 Abrasive Cleaning.	PRI-9
MD-PROC-LL-1 Abrasive Cleaning.	PS12040
NAA-PROC-NN-1 Abrasive Cleaning.	RA0110-014
MD-SPEC-LL-1 Ultrasonic Cleaning.	PB-2-13
NAA-PROC-NN-1 Ultrasonic Cleaning.	MA0110-017
NAA-PROC-NN-1 Ultrasonic Cleaning of Space Engine Hardware.	RA0610-002
HS-SPEC-HH-1 Acceptance Cleaning, Preservation and Handling of Products.	HS-1550A
USAF-STD-L-1 Cleaning and Inspection of Components of Liquid Oxygen, Liquid Nitrogen, Gaseous Nitrogen, Helium and Fuel Handling Systems.	DRPS-75
MSC-SPEC-F-2 Precision Cleaning, Specifications For, dated June 9, 1967, Supersedes MSC-SPEC-C-11, dated September 1966, 11 pages.	MSC-SPEC-C-11A

D-PROC-CC-1	DPS-4.740
Certification of Saturn Cleaning Procedures.	
GR-PROC-AB-1	
Process, Cleanliness, Pneumatic Components.	
C-SPEC-BB-1	QR. NO. 304
Cleaning Facilities, Specification A-10509305 and/or MSFC-164.	
C-SPEC-BB-1	QR. NO. 0202
Cleaning per Specification 10M01671.	
<u>Oxygen, Nitrogen, Hydrogen Peroxide and Water Systems</u>	
FCI-SPEC-EE-1	PS-203
Cleaning for Oxygen Service.	
WK-PROC-AE-1	151674
Cleaning and Inspection Procedure for Nitrogen Storage System.	
B-SPEC-ZZ-1	D5-12527
Supplier Cleaning Control Requirements for Contamination Sensitive Components.	
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Cleaning, Handling and Installation of Model 133P Coolant and Water System.	
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Nitrogen System Components, Cleanliness Control for.	
WK-PROC-AE-1	151697
Cleaning Procedure, Inert Prefill Unit.	
GD-INSTR-DD-1	1704
Instructions for Cleaning Equipment for Oxygen Service.	
LTV-SPEC-JJ-1	308-15-3A
Hydrogen Peroxide Reaction Thrust System Design, Installation, and Inspection Requirements for.	
USAF-SPEC-L-1	AFTD-42B-1-17
Field Handling of Concentrated Hydrogen Peroxide (formerly NAVER 06-25-501).	

NAA-SPEC-NN-1	PRI-37
Processing of Hydrogen Peroxide System Components.	
LTV-PROC-JJ-1	CVA-10-62A
Preparation of Metallic Surfaces for Exposure to Concentrated Hydrogen Peroxide.	
LTV-PROC-JJ-1	308-20-3
Preparation of Metallic and Non-Metallic Surfaces for Exposure to Hydrogen Peroxide in Manned S/C.	
LTV-PROC-JJ-1	CVA-10-64A
Preparation of Non-Metallic Surfaces for Exposure to Concentrated Hydrogen Peroxide.	
<u>Cleaning, Sampling, Manufacturing Process for Cleaning Lines, Instruments, Hydraulic & Fluid Systems and Miscellaneous Hardware</u>	
MSFC-PROC-E-1	10MO1445A
Cleaning of Pressurized and non-Pressurized Instrument Compartments, Procedure for, dated 12-30-65.	
MSC-SPEC-F-2	MSC-SPEC-C-15
Pressure Garment Assembly Cleanliness, Specifications For, dated October 13, 1966, 5 pages.	
MD-PROC-LL-1	PS12301
Cleaning of Model 133 Environmental Control System Lines and Non-Operating Components.	
NAA-PROC-NN-1	MA0110-001
Cleaning Hydraulic System Components.	
MSFC-PROC-E-1	MSFC-PROC-166C
Hydraulic Systems Components and Hydraulic Fluids for Space Vehicles, Cleaning, Testing, and Handling, Procedure For, dated 8-18-65.	
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Hydraulic System Detailed Parts, Components, Assemblies and Hydraulic Fluids for Space Vehicles, Cleaning, Testing, and Handling, dated February 7, 1967, Superseding MSFC-PROC-166C dated July 18, 1965 and Amendment #1 dated September 3, 1965, 32 pages.	

MSGC-PROC-E-1	MSFC-PROC-166D
Hydraulic System Detailed Parts, Components, Assemblies and Hydraulic Fluids for Space Vehicles, Cleaning, Testing, and Handling Amendment #2 dated September 15, 1967, Superseding MSGC-PROC-166D Amendment #1 dated March 15, 1967, 2 pages.	
GD-PROC-DD-2	27-47381-BK1A
Determination of Particulate Contamination of Hydraulic Fluids, Particle Count Method.	
MD-PROC-LL-1	PS12302
Cleaning of Cryogenic, Hydraulic and Pneumatic System Lines and Components Model 133P.	
MD-PROC-LL-1	PS12300
Cleaning and Capping of Fluid Carrying Parts and Assemblies.	
MSFC-STD-E-3	60 B32086
Cleaning, Testing & Handling of Hydraulic Systems, Components and Fluids dated January 12, 1965, 18 pages.	
MSFC-SPEC-E-1	60B32086B
Cleaning, Testing and Handling of Hydraulic Systems, Components and Fluids, 19 pages, dated September 1966.	
MSFC-PROC-E-1	20M85015
Procedure for Cleaning, Testing and Handling of Onboard Hydraulic System Components and MIL-H-5606 Hydraulic Fluid, dated November 1961, 26 pages.	
MSFC-PROC-E-3	M-ME-MPROC-106.0
Manufacturing Process for the Cleaning of Teflon Lined Flex Hose, dated April 15, 1963, 6 pages.	
MSFC-MPROC-E-3	M-ME-MPROC-105.0
Interim 'Manufacturing' Process for Cleaning and Testing of Onboard Hydraulic System Components, dated April 26, 1963, 10 pages.	
MSFC-SPEC-E-3	MS 101.5
Proposed Manufacturing Specifications for the Re-cleaning of Fuel and Oxidizer Containers, dated September 22, 1962, 5 pages.	
MSFC-MPROC-E-3	M-ME-MPROC-104.0
Manufacturing Process for Cleaning of Electrical Connectors, dated March 18, 1963, 5 pages.	

MSFC-SPEC-E-3	MS 101.3
Manufacturing Specifications for the Cleaning of Carbon Steel Alloys dated April 30, 1962, 13 pages.	
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Cleaning, Deoxidation, Electroplating, Pickling, Desealing

NAA-PROC-NN-1	RA0110-018
Cleaning and Passivating of Corrosion and Heat Resistant Alloys, Nickel and Nickel Base Alloys.	
AG-PROC-V-1	AGC-46481
Corrosion Resistant Steels, Passivating Process for.	
MSFC-SPEC-E-3	MS 100.3C
Cleaning and Passivation of Heat Exchanges, dated November 5, 1962, Supersedes MS 100.3B dated July 6, 1962, 11 pages.	
MSFC-SPEC-E-3	MS 100.4A
Cleaning and Passivation of Austenitic (300 Series) Stainless Steel Suction Lines, dated April 8, 1962, 19 pages.	
MSFC-PROC-E-1	10419901
Cleaning and Passivation of Bellows and Ducts, Procedure For, dated September 12, 1963, 4 pages.	
MSFC-SPEC-E-1	10419901A
Cleaning and Passivation of Bellows and Ducts, Specifications for, dated 2-26-60.	
MC-PROC-KK-1	DP50402
Passivating Stainless Steel.	
GE-PROC-FF-1	SI-211614
Passivation of Stainless Steel.	
GE-PROC-FF-1	SI-211637
Passivation of Austenitic Stainless Steel.	
GE-SPEC-FF-1	SI-211614
Passivation of Stainless Steel.	
MD-STD-LL-1	PS13001
Passivation of Corrosion and Heat Resistant Alloys.	

MD-STD-LL-1	PS13002
Passivation and Conditioning of Parts for Hydrogen Peroxide Systems.	
NAA-SPEC-NN-1	PR601-3
Passivation of Stainless Steel Parts for Hydrogen Peroxide.	
MSFC-SPEC-E-3	95 MO 1108
Deoxidation of Aluminum Alloys 2014, 2219, 5056, 5456, 6061 and 7075, Specification For, dated February 6, 1964, 6 pages.	
MSFC-SPEC-E-3	MS 100.2A
Deoxidation of Aluminum Alloys, dated February 2, 1962, Supersedes MS 100.2 dated September 22, 1961, 10 pages.	
GD-SPEC-DD-2	O-75089
Electropolishing Metals, Specification for.	
MD-PROC-LL-1	PS12050
Pickling.	
NAA-PROC-NN-1	MA0610-016
Desealing and Passivation of Corrosion and Heat Resistant Alloys - Apollo Program.	
NAA-PROC-NN-1	MA0110-013
Desealing and Passivation of Corrosion and Heat Resistant Alloys.	
NAA-PROC-NN-1	MA0110-016
Desealing and Passivation of Corrosion and Heat Resistant Alloys.	
BA-PROC-Y-1	BPS-4007
Cleaning and Passivating Corrosion Resistant Steels.	

PACKAGING

Packaging, Cleanliness, Preparation, Handling

NAA-SPEC-NN-1	MB0295-005
Material Cleanliness Level, Precision Clean Packaging.	
GD-SPEC-DD-2	F2M-12-694
Hydraulic Components, Cleanliness and Preparation for Delivery, Requirements for.	
MIL-STD-K-1	MIL-M -9950
Missile Components-Liquid Oxygen, Liquid Nitrogen, Gaseous Oxygen, Gaseous Nitrogen, Instrument Air, Helium and Fuel Handling Systems, Cleaning and Packaging for Delivery, 13 pages; dated May 1962. Amendment 1, dated July 1962.	
RICH-GUIDE-AI-1	
A Brief Guide to Clean Room Packaging, no date, 2 pages.	
NAA-PROC-NN-1	RA0616-009
Space Engine Precision Clean Hardware: Protection, Packaging, Packing, and Certification: Methods of.	
NAA-SPEC-NN-1	MA0116-017
Supplier Packaging Requirements.	
NAA-SPEC-NN-1	MA0616-035
Clean Packaging Requirements for Apollo Spacecraft and Support Equipment.	
NAA-SPEC-NN-1	MA0616-016
Clean Packaging Requirements for S-II for Components.	
TC-PROC-PP-1	0007
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TC-PROC-PP-1	7007
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TC-PROC-PP-1	900007C
Cleaning, Packaging & Inspection of Oxygen Systems.	

USAF-STD-L-1	K3655-00887
Packaging Instruction for Packaging of Spare Parts Applicable to Liquid Propellant Equipment.	
NAA-PROC-NN-1	RA0116-095
Special Clean Purchased Parts: Protection, Packaging, Packing, and Certification of.	
NAA-SPEC-NN-1	MB0295-007
Closures, Special Plastic, Precision Clean Packaging.	
NAA-PROC-NN-1	RA0116-092
Special Clean Hardware: Protection, Packaging, Packing and Certification, Methods of.	
NAA-PROC-NN-1	MA0116-015
Clean Packaging, Requirements and Procedures.	
NAS-STD-AJ-1	NAS-3425
Bag, Anti-Static, Single Item, dated 1967, 1 page.	
NAA-STD-NN-1	RA0116-054
Closures - Protective: Selection and Usage.	
NAA-PROC-NN-1	MB0295-006
Film, Transparent, Precision Packaging.	
NAA-PROC-NN-1	RA0110-006
Hydraulic Component Parts, Fittings and Tube Assemblies: Cleaning, Packaging and Handling of.	
NAA-PROC-NN-1	MB0295-008
Tape, Non-Residual, Precision Packaging.	
NAA-PROC-NN-1	LA0110-003
Processing of Hydrogen Peroxide System Components.	
MSFC-SPEC-E-3	MAO 616-016
Clean Packaging Requirements for Saturn S-II Liquid and Gaseous Oxygen System Components, dated August 23, 1966, Superseding Spec. dated March 4, 1964, 6 pages.	

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Supplement 2

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MSFC-STD-343/1

Handling, Protection and Packaging of Flared Tube Fittings, dated 3-65, 4 pages.

MSFC-STD-E-1

MSFC-STD-343/2

Handling, Protection and Packaging of Valves and Control Devices, dated 3-65, 4 pages.

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Contamination Protection Packaging of Parts and Components to Maintain Cleanliness Requirements.

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MIL-STD-K-1

MIL-P-52211

Parts and Assemblies, for Generating Plants, Oxygen-Nitrogen, and Related Equipment, Packaging of.

MSC-SPEC-F-2

MSC-SPEC-C-12A

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MSC-SPEC-F-2

MSC-SPEC-C-12A

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MSC-SPEC-F-4

MSC-SPEC-C-25

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JPL-SPEC-H-1	ZPP-2117-GEN
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GA-SPEC-GG-1	LSP-360-002
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Vendor Packaging, Commercial Level.	
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GD-STD-DD-2	1-00035
Vendor Packaging Container, Individual.	
GE-PROC-FF-1	SI-211639
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BA-SPEC-Y-1
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BPS-4266

AG-STD-V-1
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AGC-46387

D-PROC-CC-1
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DPS-4.905-1

D-PROC-CC-1
Packaging of Liquid Hydrogen Components.

DPS-4.930-1

WATER

Sterile, High Purity, Ethylene Glycol-Water Solutions, Requirements For

LRS-STD-AG-1

Particulate Free, Sterile Water, no date, 11 pages.

MSC-SPEC-F-4

Water, High Purity and Distilled, Specifications For, dated May 5, 1967
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MSC-SPEC-C-20A

MSC-SPEC-F-4

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Ethylene Glycol-Water, Specifications For, dated May 5, 1967, Supersedes
MSC-SPEC-C-22, dated November 8, 1966, 8 pages.

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Deionized Water Purity Control Requirements for, Specification for.

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MSC-PROC-F-4

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MSC-PROC-C-106

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